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*Mock Project: Cache Replacement Polices*

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# Design Document

Source files are found in the "implementation" directory. I used the Abstract Base Class (ABC) to allow for swapping out of implementations of each. \_\_all\_\_ at the top of the file exports these classes, allowing them to be used by other files. There are two files which allow for experimentation and additional experimentation. The f-string allows printing formatted strings easily to the user.

# Report 1

**Case 1**

LRU: 1

FIFO: 1

LFU: 1.0

**Case 2**

LRU: 0.38500000001

FIFO: 0.39

LFU: 0. 3349999999998

**Case 3**

LRU: 0.245

FIFO: 0.3

LFU: 0.2

# Analysis

The Least Frequently Used (LFU) policy usually less than the others. For Case 1, it did the same as the Least Recently Used (LRU) policy and the First In First Out (FIFO) policy. This is acceptable because it is the same number and not any different. These are the largest numbers in the table. In Case 2, it was less than the others (which were about the same, only about 0.05 different). In Case 3, LFU was the lowest of all: 0.2. This is 0.1 lower than FIFO and 0.055 lower than LRU. FIFO is the largest in Case 3 with a value of 0.3.